

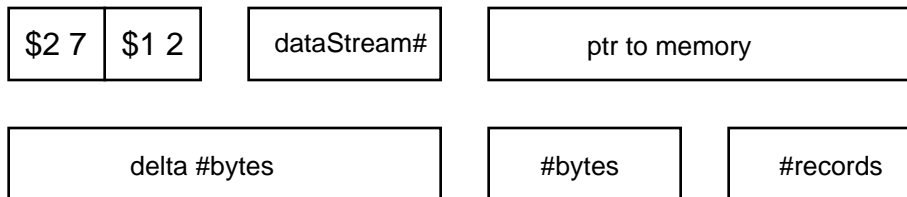
Memory Data Streams

Data access table entry type

Dec 22, 1991

Data streams have been a part of the local station system software for a few years. The original use was to collect clock events from special hardware for the Loma Linda control system. Since then, major use of data streams has been made with the D0 high voltage control system. In that case, a separate processor writes its data into a data stream for which flexible access is supported through three different listypes. This note describes a data access table entry type which provides for *copying memory data into a data stream*. Access to such data can be made by any number of users, a fundamental feature of data stream implementation.

Data access table (DAT) entry format



The entry type# is \$27. The DSTRM table# is \$12. The dataStream# is the DSTRM table entry#. In that entry is described the type of data stream queue, its entry size, total size and base address, and an 8-character name as a diagnostic.

This DAT entry provides for copying data records into the data stream from areas of memory. Beginning at “ptr to memory”, “#bytes” are copied into the specified data stream. If #records > 1, then additional records of the same size are copied, applying the “delta #bytes” to the “ptr to memory” each time.

The data actually written into the record is the memory data preceded by 16 bytes of header information in the following format:

| | |
|--------------------|----------------|
| time-of-day | 8-byte BCD |
| ptr to memory data | 4-byte address |
| spare longword | 4-byte zero |

As always, the first 4 bytes of the response data are two words signifying the number of records included in the reply and the entry size of each record. If the entry size is zero, the first word of each record is the record's size.